(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



- 1 COLOR DIVIDIDO NA CONTRA CARRA CAR

(43) International Publication Date 28 April 2005 (28.04.2005)

PCT

(10) International Publication Number WO 2005/038468 A1

- (51) International Patent Classification⁷: 15/18, G01L 9/00, 1/00, B81B 1/00, 3/00
- G01P 15/08,
 - UIP 15/08,
- (21) International Application Number:

PCT/US2003/012536

(22) International Filing Date:

22 September 2003 (22.09.2003)

(25) Filing Language:

English

(26) Publication Language:

English

- (71) Applicant (for all designated States except US):

 BROTHER INTERNATIONAL CORPORATION
 [US/US]; Henry Sacco, Esq., 100 Somerset Corporate
 Blvd., Bridgewater, NJ 08807-0911 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): DARTY, Mark, Anthony [US/US]; 1068 Stanhope Road, Collierville, TN 38107 (US). HABIB, Mohamadinejad [US/US]; 6481 Kings Cove, Bartlett, TN 38135 (US).

(74) Agent: LEDONNE, Eugene; Reed Smith LLP, 599 Lexington Avenue, 29th Floor, New York, NY 10022 (US).

(81) Designated States (national): AE, AG, AL, AU, BA, BB,

- BR, BZ, CA, CN, CO, CR, CU, DM, DZ, EC, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX, NO, NZ, OM, PH, PL, RO, SC, SG, TN, TT, UA, US, UZ, VC, VN, YU, ZA.

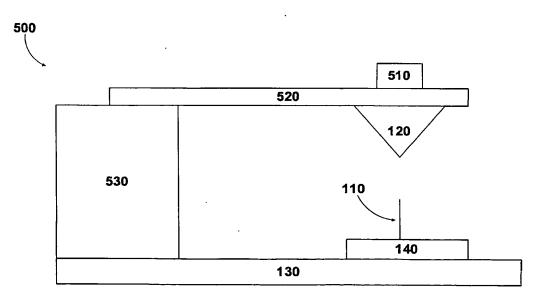
 (84) Designated States (regional): ARIPO patent (GH, GM,
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A METHOD AND APPARATUS FOR SENSING APPLIED FORCES



(57) Abstract: An apparatus for sensing a force. The apparatus includes a nanostructure being suitable for emitting electrons and a collector. The collector is proximately positioned with respect to the nanostructure so as to receive the emitted electrons and define a gap therebetween. The gap is partially dependent upon the applied force and the emission and reception of the electrons are indicative of the applied force.

